

New York State Department of Transportation

PIA Red Flag NB23U4W017

By: Malav Shah

Flag Date: May 11, 2023

Superseding Information:

This flag supersedes: YF NB22CTW020

Structure Information

BIN: 1065318

Feature Carried: 278I278IX2M23027

Feature Crossed: 6TH AVENUE

Orientation: 8 - NORTHWEST

Region: 11 - NEW YORK CITY

County: KINGS

Political Unit: City of NEW YORK

Approximate Year Built: 1962

Posted Load Matches Inventory : Yes

Bridge Load Posting (Tons) : Not Posted for Load

Primary Owner: New York State Department of Transportation

Primary Maintenance Responsibility: 12 - State - Subcontracted to another Party

Typical or Main Span Type: 3 - Steel, 02 - Stringer/Multi-Beam or Girder

This Bridge is not a Ramp

Number of Spans: 322

Verbal Notification Information

Person Notified: Heinz Joachim, P.E.

Date: May 11, 2023 1:30:00 PM

Of: NYSDOT Region 11

Signature Information

Signature: Malav Shah, P.E. 106620-1

Date: June 07, 2023

Reviewed By: Robert Kemp

Date: June 07, 2023

Attachments: 7

Flagged Elements

Parent Element	Element	Total Quantity	Unit
Span Number : 230			
	107 - Steel Open Girder/Beam	989	ft

Flagged Condition Description

This PIA Red Flag No. NB23U4W017 is located at the same location as previously issued Yellow Flag No. NB22CTW020.

Location: Span 230, Girder G19 at Pier 229.

Description:

The web of the Girder G19 is connected to the Pier Cap through a short connection angle on the right face and stiffener angle on the left face. The noted deficiencies are as follows:

- Short connection angle on the right face of the girder:

1. The connection angle exhibits large corrosion holes in the top and bottom side of the connecting leg. The portion between these two holes exhibits paper-thin steel surface (See Sketch Photo No.3 and Photo No. 5).

- Stiffener angle on the left face of the girder:

1. The connecting leg of the stiffener angle has a 1/2"H x full width hole in the upper side of the connecting leg, above the girder web.

2. The portion of the connecting leg near the heel of the angle, parallel to the girder web end vertical edge, has two holes (i) 2-1/2"H x 1/2"W adjacent to the top corner of the girder web end, and (ii) 4-1/2"H x 1/2"W hole adjacent to the bottom corner of the girder web end. The portion between these two holes exhibits paper-thin steel surface.

3. The connecting leg below the girder web has a 1/2"H x full width hole.

4. There is a large hole (approx. 3-1/2"H x full width) at the base of the connecting leg, above bottom flange of the pier cap of Pier 229, on the Span 230 side. (See Sketch Photo No.2 and Photo Nos. 7 and 8).

Notes:

1.The affected member, Girder G19 is a load path redundant steel girder consisting of a web depth of 21.30" inches and thickness of 0.608 inches and is located under the deck in the roadway, approximately 12" off the edge of curb line/safety walk

2.The adjacent Girder (left) G18, is 5'-5" on center, has repair plates and is in fair condition,

3.The adjacent Stringer (right) S2, approximately 24" on center, acts as a support for the railing and curb above and receives no direct live loading. Stringer S2 in Span 230 at the connection to Pier 229 exhibits section loss in the web with a corrosion hole and in the bottom flange, at the pier.

4. This location, Span 230, Girder G19 at Pier 229, was inspected during the 2022 SILO, with the following description as per the Yellow Flag NB22CTW020 report:

The right side connection angle at Girder G19 connection to the pier cap at Pier 229 exhibits a 4-3/4" (previously 3-1/2") long vertical corrosion crack x 1/2" wide (no change) at the lower fillet section. The upper fillet section has a 5" long (previously 2") vertical corrosion crack x 1/4" wide (previously 1/8"). In addition, the vertical stiffener connection angle is heavily corroded and exhibits a 3-1/2"W x 2-1/2"H (previously 3-1/4"W x 2-1/2"H) corrosion hole at the base and a 4"W x 3"H L-shaped corrosion hole (no change) with a 1-1/2" long corrosion crack (not previously noted) adjacent to the lower cope of G19 with 50% section loss in the surrounding area.

5. A double lane closure on 3rd Avenue Eastbound with a 35' bucket truck is required to access the flagged location.

Flag Photographs

Photo Number: 1

Photo Filename: NB23U4W017 LOCATION PLAN.JPG

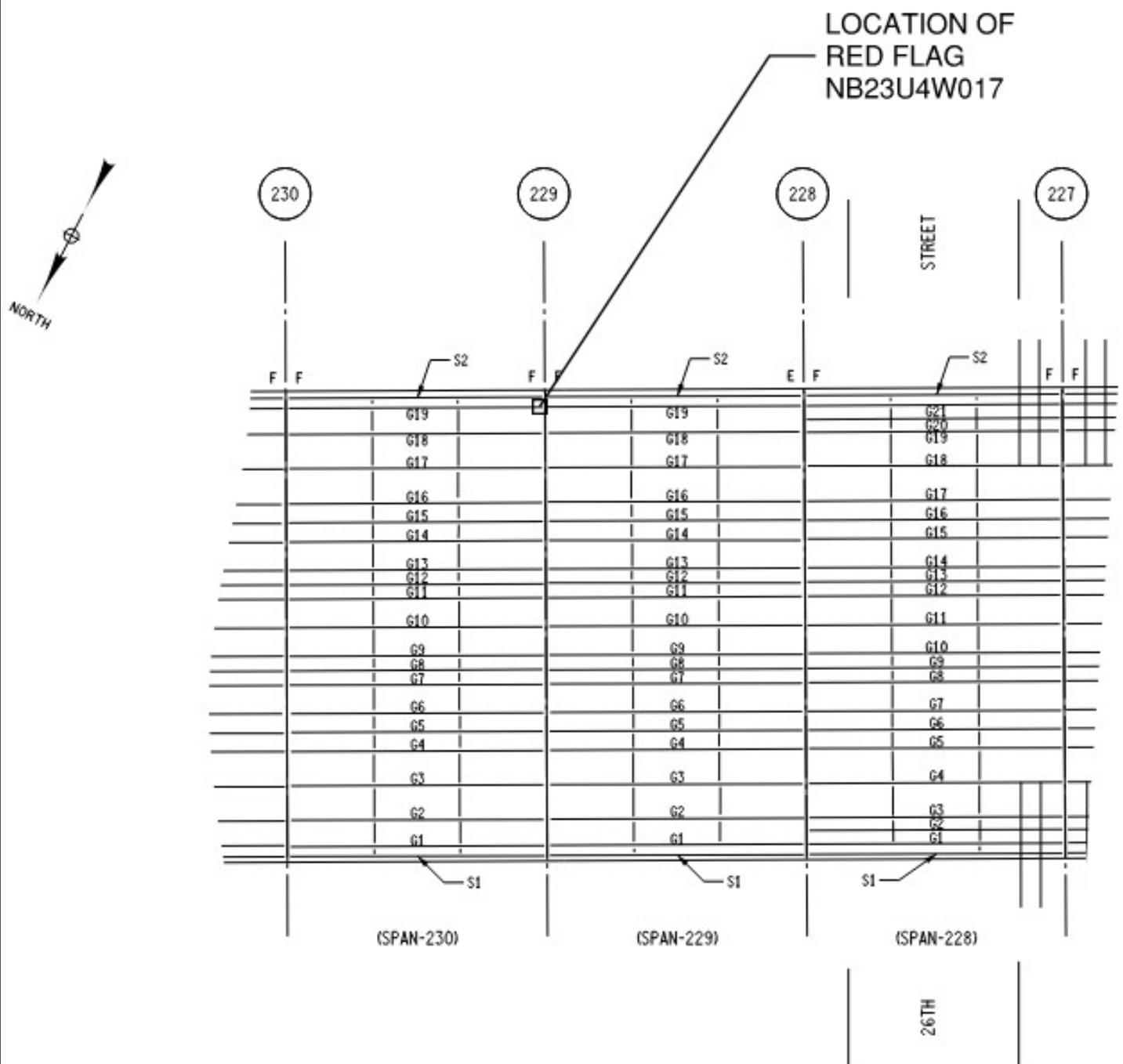
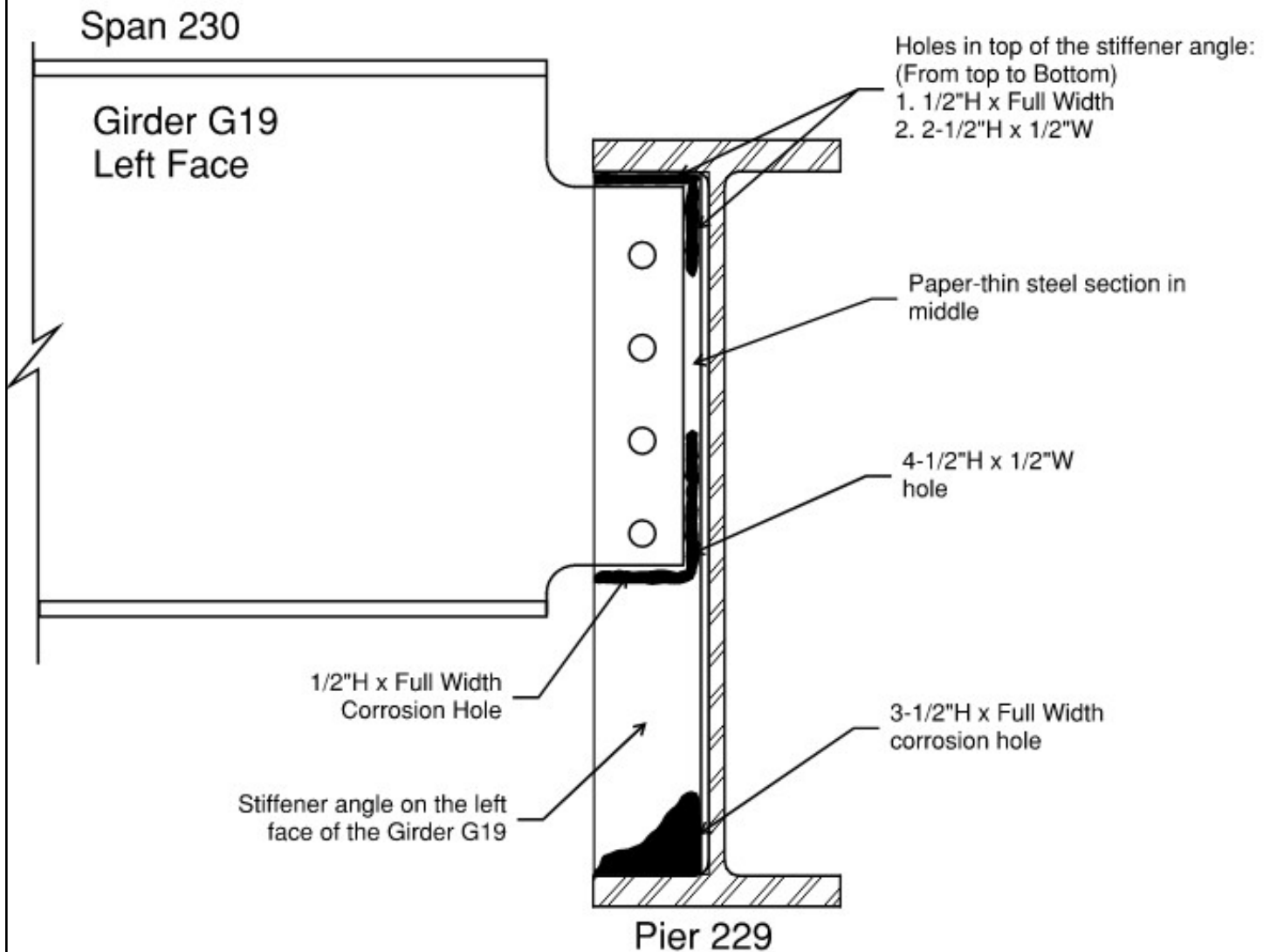
**Attachment Description: Location Plan**

Photo Number: 2

Photo Filename: NB23U4W017 CONDITION SKETCH 1.JPG

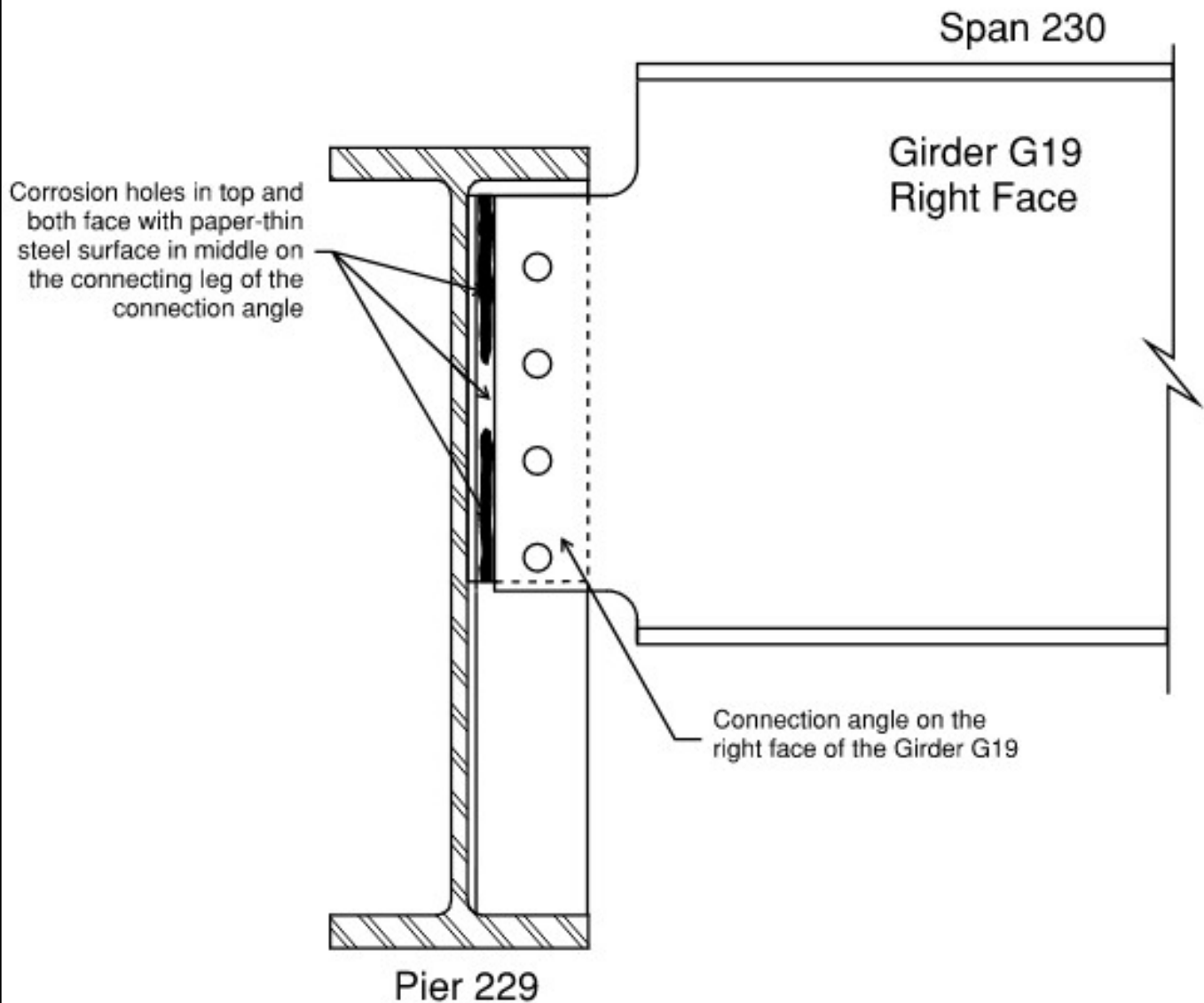


SKETCH FOR PIA RED FLAG # NB23U4W017
SPAN 230, GIRDER G19 AT PIER 229
(LOOKING RIGHT)
N.T.S

Attachment Description: Flag Condition Sketch 1

Photo Number: 3

Photo Filename: NB23U4W017 CONDITION SKETCH 2.JPG

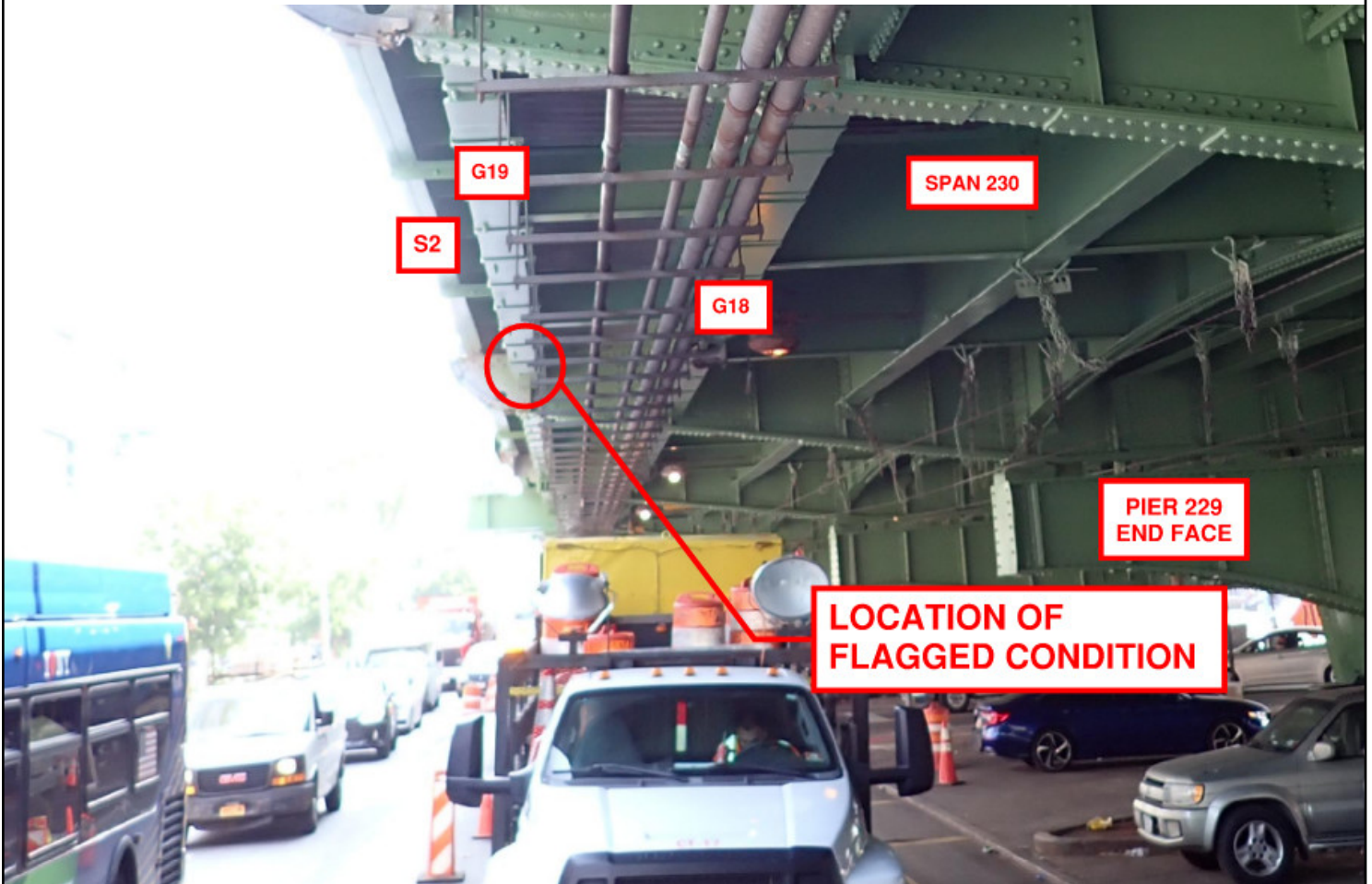


SKETCH FOR PIA RED FLAG # NB23U4W017
SPAN 230, GIRDER G19 AT PIER 229
(LOOKING LEFT)
N.T.S

Attachment Description: Flag Condition Sketch 2

Photo Number: 4

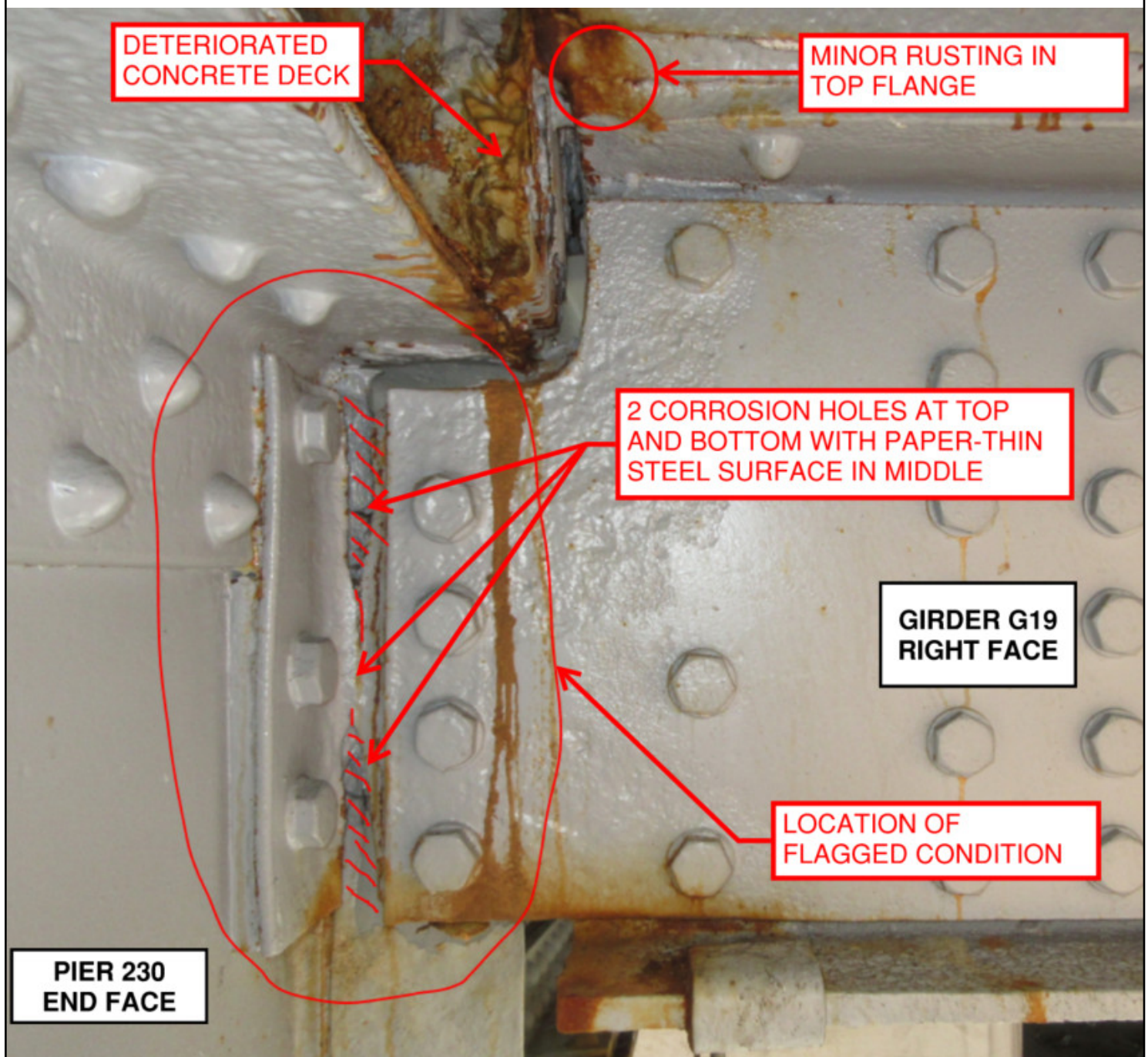
Photo Filename: NB23U4W017 General View.JPG



Attachment Description: General View of Flag Location. Looking Begin - Up.

Photo Number: 5

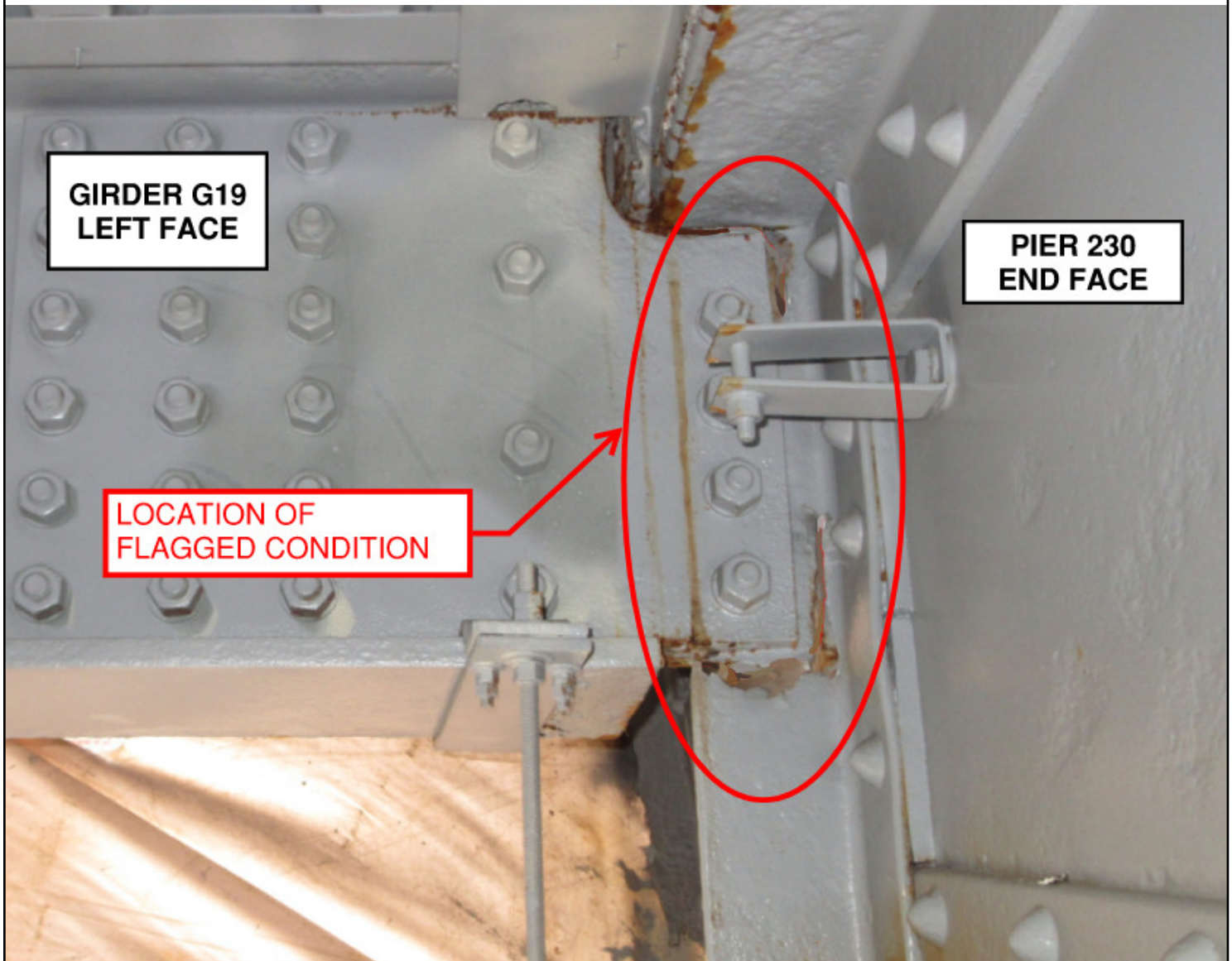
Photo Filename: Picture 1.JPG



Attachment Description: Connection angle exhibits large corrosion holes in the top and bottom side of the connecting leg with paper-thin steel surface in middle. Looking Left.

Photo Number: 7

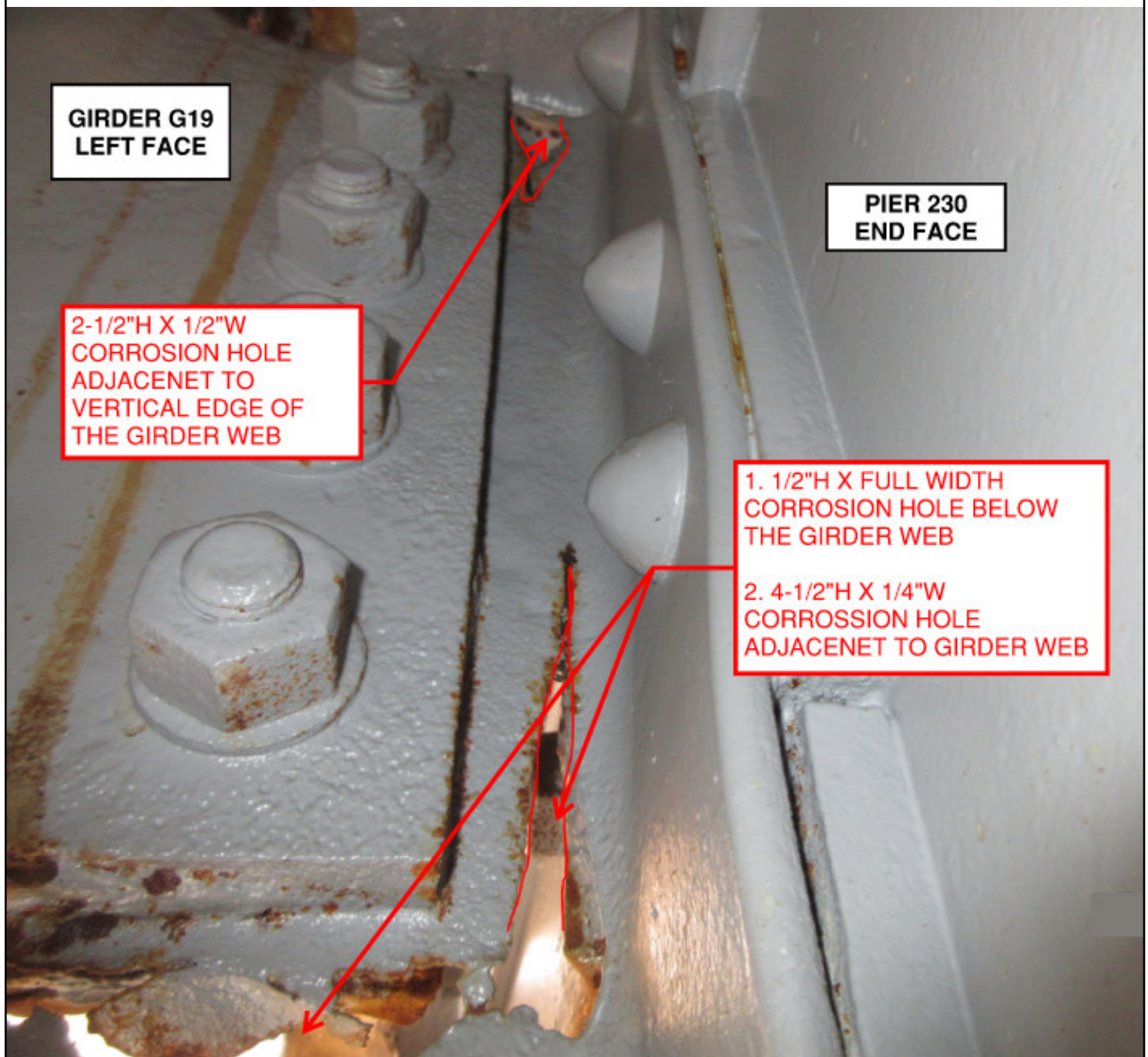
Photo Filename: Picture 3.JPG



Attachment Description: General View of Girder G19 left face. Looking Begin - Right.

Photo Number: 8

Photo Filename: Picture 2.JPG



Attachment Description: Connecting leg of the stiffener angle has a 1/2"H x full width hole in top and bottom, and a 2-1/2"H x 1/2"W hole adjacent to the top corner and a 4-1/2"H x 1/2"W hole adjacent to the bottom corner of the girder web end. Looking Right-Up.